

AMENDMENTS

IN THE CLAIMS:

Please amend claims 5, 10-11, 13, 15, 30 and 33-34 as follows:

5. (Twice Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a white diffusing film is disposed adjacently to the second substrate, on a side of the second substrate, opposite the liquid crystal, no polarizer being provided between the second substrate and the white diffusing film,

a polarizing film is disposed on a side of the white diffusing film, opposite the second substrate, and

a reflector is disposed on a side of the polarizing film, opposite the white diffusing film;

C1
C2
said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light.

C2
10. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one surface thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed adjacently to the second substrate on a side of the second substrate, opposite the liquid crystal, no polarizer being provided between the second substrate and the white diffusing film, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate;

said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

11. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on the visible side of the white diffusing film, and

a reflector is provided on a side of the second substrate, opposite the liquid crystal;

said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

13. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate,

oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

C₃
C₂
said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

C₄
15. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes, formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal

electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

C4
C5
said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a holographic film in which regions having different refractive indices are spatially distributed.

C5
30. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

C5
Saw
said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, provided with a plurality of projections and depressions formed on the surface thereof, causing a portion of light incident on the surface to undergo diffuse reflection and remaining portions of the light to be transmitted therethrough, said projections and depressions formed on the surface being in a shape approximating to a quadratic curve,

and said reflector being a transfective reflector having the characteristics of having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light.

C6
33. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely

disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on a side of the second substrate, opposite the liquid crystal, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate;

said white diffusing film having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, provided regions corresponding to respective pixels, having a transmittance differing from that for regions thereof, around the respective pixels.

34. (Twice Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on a side of the second substrate, opposite the liquid crystal,, no polarizer being provided between the second substrate and the white diffusing film, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate,

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CL
said white diffusing film allowing circularly polarized light to pass therethrough substantially
as the circularly polarized light, and said pixels being provided with color filters.

MARKED-UP VERSION OF AMENDMENTS

IN THE CLAIMS:

Claims 5, 10-11, 13, 15, 30 and 33-34 have been amended as follows:

5. (Twice Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a white diffusing film is disposed adjacently to the second substrate, on a side of the second substrate, opposite the liquid crystal, no polarizer being provided between the second substrate and the white diffusing film,

a polarizing film is disposed on a side of the white diffusing film, opposite the second substrate, and

a reflector is disposed on a side of the polarizing film, opposite the white diffusing film;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light.

10. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one surface thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed adjacently to the second substrate on a side of the second substrate, opposite the liquid crystal, no polarizer being provided between the second substrate and the white diffusing film, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

11. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on the visible side of the white diffusing film, and

a reflector is provided on a side of the second substrate, opposite the liquid crystal;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

13. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate,

oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a reflection-type polarizing film, wherein one of the optic axes thereof is the transmission axis and the other, substantially orthogonal to the transmission axis, is the reflection axis.

15. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes, formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal

electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, and said reflector being made up of a holographic film in which regions having different refractive indices are spatially distributed.

30. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a polarizing film without reflection characteristics is disposed on the visible side of the first substrate,

a polarizing film without reflection characteristics is disposed on a side of the second substrate, opposite the liquid crystal,

a white diffusing film is disposed on a side of the polarizing film, opposite the second substrate, and

a reflector is disposed on a side of the white diffusing film, opposite the polarizing film;

said white diffusing film is ~~a white diffusing film~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, provided with a plurality of projections and depressions formed on the surface thereof, causing a portion of light incident on the surface to undergo diffuse reflection and remaining portions of the light to be transmitted therethrough, said projections and depressions formed on the surface being in a shape approximating to a quadratic curve,

and said reflector is being a transfective reflector having the characteristics of having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light.

33. (Three Times Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely

disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on a side of the second substrate, opposite the liquid crystal, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate;

said white diffusing film ~~has~~ having the characteristics of allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and having a substantially equal transmittance for light components at respective wavelengths in the wavelength range of visible light, provided regions corresponding to respective pixels, having a transmittance differing from that for regions thereof, around the respective pixels.

34. (Twice Amended) A liquid crystal display device comprising: a first substrate made of a transparent material, provided with signal electrodes or display electrodes formed on one face thereof; a second substrate made of a transparent material, provided with opposed electrodes formed thereon; and liquid crystal sealed in-between the first substrate and the second substrate, oppositely disposed to each other with a predetermined gap interposed therebetween such that each of the signal electrodes or the display electrodes faces each of the opposed electrodes so as to form a pixel, characterized in that

a white diffusing film is disposed on a side of the second substrate, opposite the liquid crystal,, no polarizer being provided between the second substrate and the white diffusing film, and

a reflector is disposed on a side of the white diffusing film, opposite the second substrate,

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said white diffusing film allowing circularly polarized light to pass therethrough substantially as the circularly polarized light, and said pixels being provided with color filters.